

No. 631,516.

Patented Aug. 22, 1899.

R. WILMS.
LOOM.

(Application filed Oct. 25, 1898.)

(No Model.)

Fig. 1

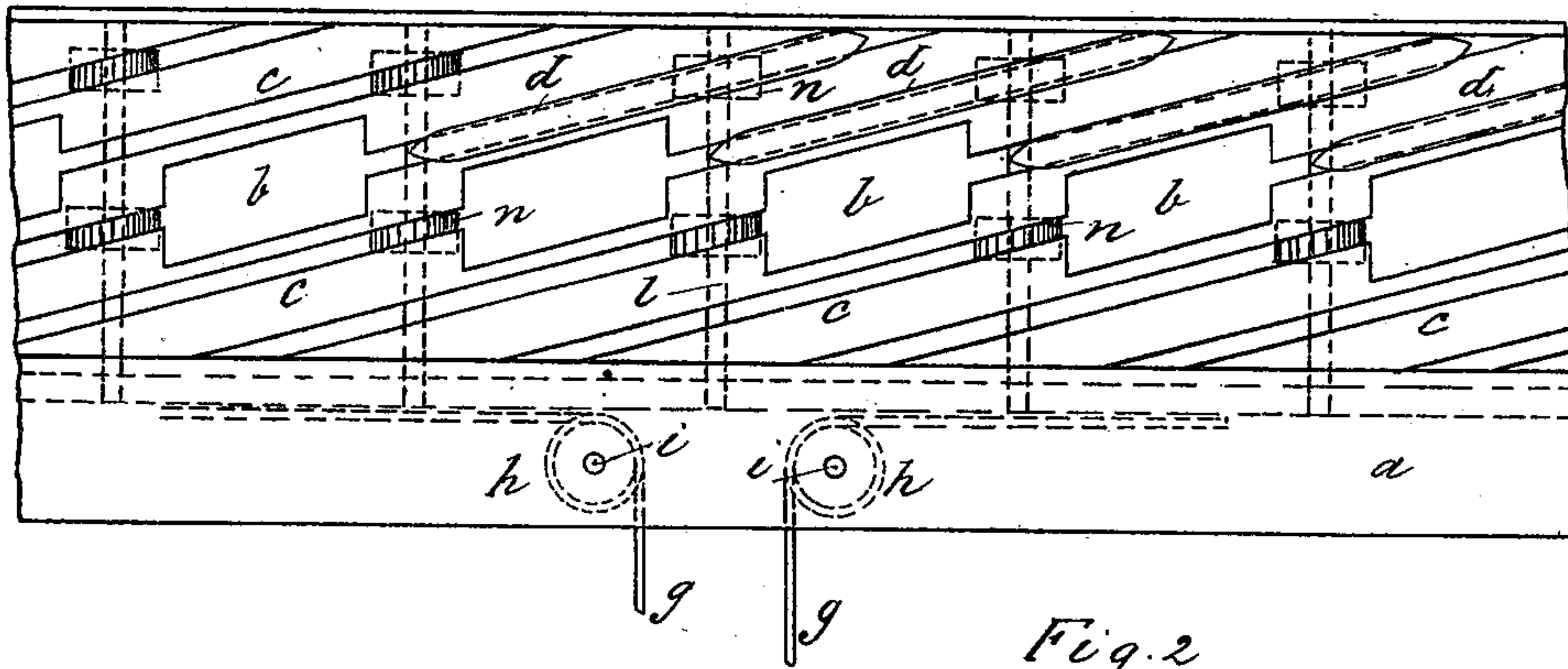


Fig. 2

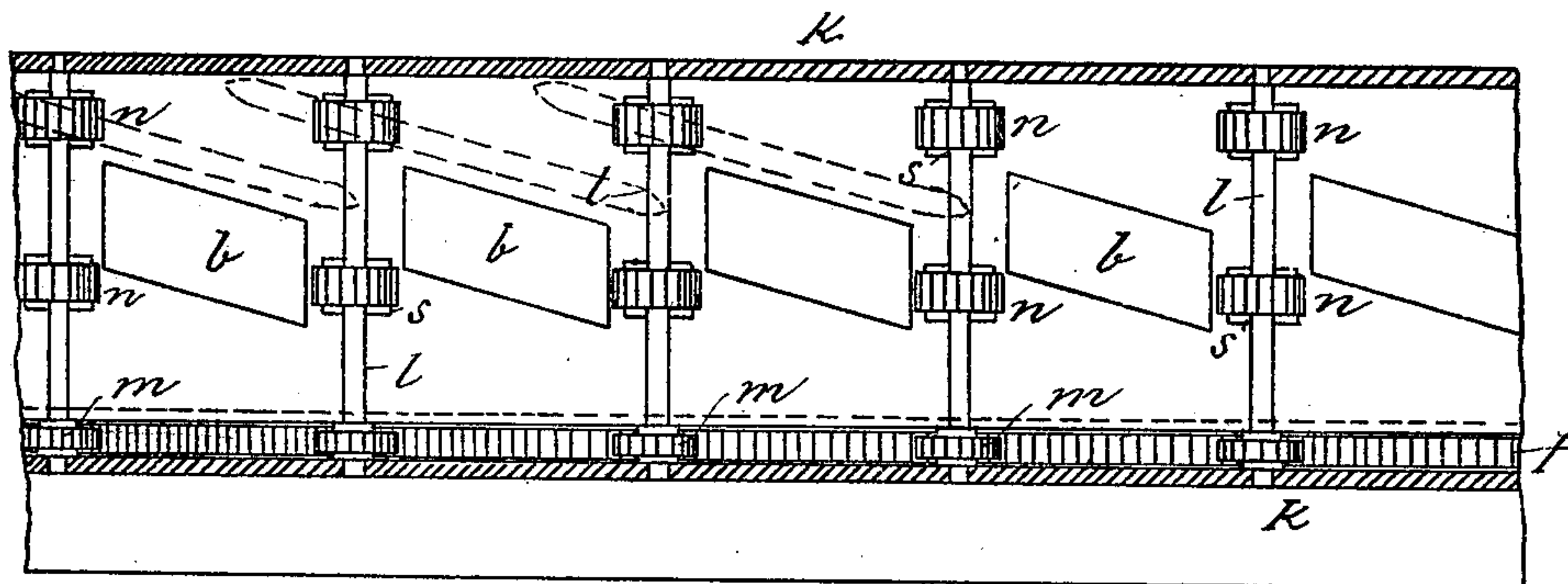
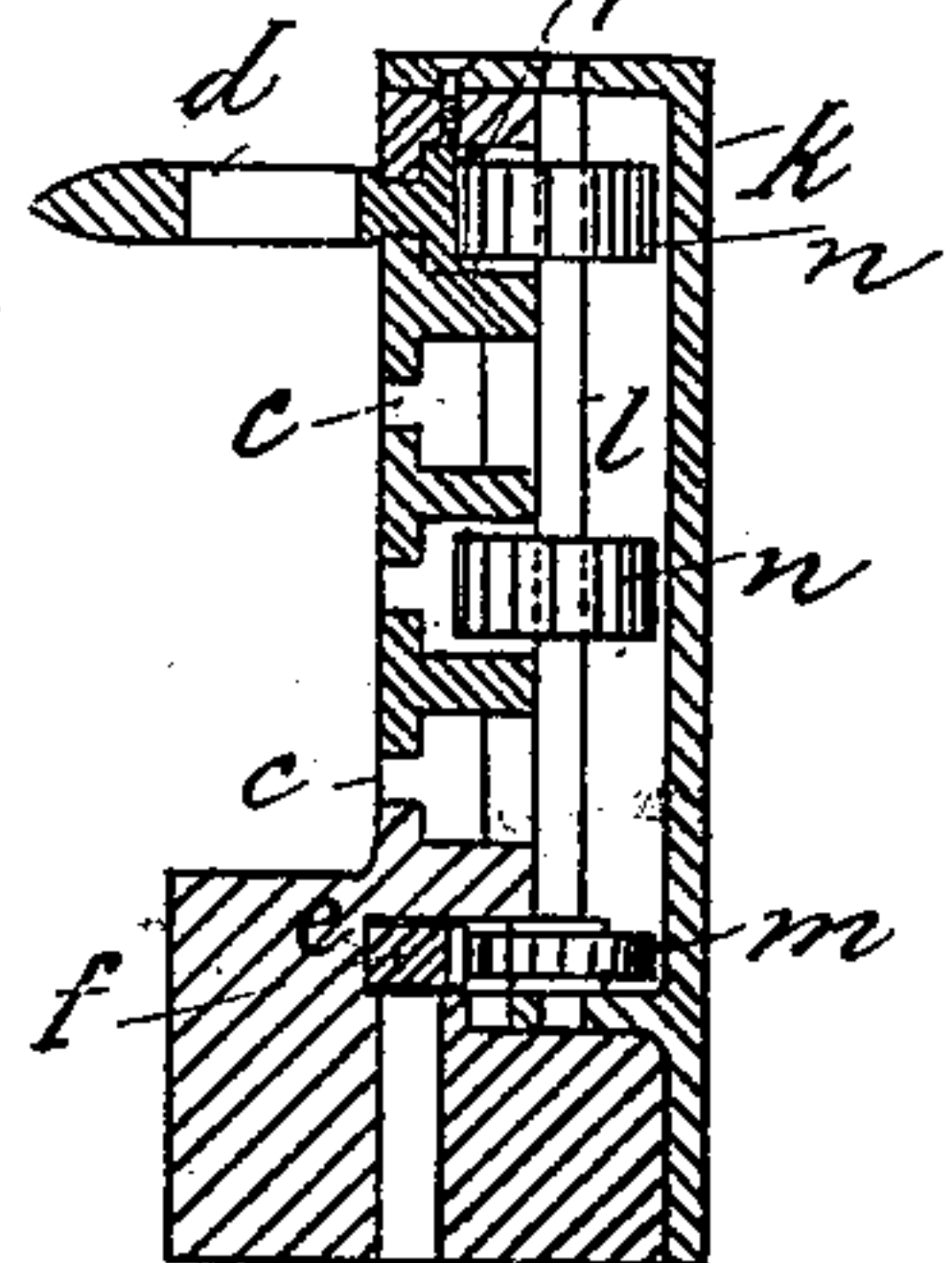


Fig. 3



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LOOM.

SPECIFICATION forming part of Letters Patent No. 631,516, dated August 22, 1899.

Application filed October 25, 1898. Serial No. 694,562. (No model.)

To all whom it may concern:

Be it known that I, REMY WILMS, a subject of the Emperor of Germany, residing at Barmen, in the Province of Rhenish Prussia, Germany, have invented a new and useful Improvement in Looms, of which the following is a full and clear description.

My invention relates to an improved loom for weaving ribbons or other narrow woven articles; and it consists in the special construction of the lathe or batten, which is furnished with straight shuttles that cross the slots through which the warp is passed in a slanting direction. Instead of running before these slots in a horizontal or curved line, as in ordinary battens, the shuttles in my loom are reciprocating above and below said slots. By this arrangement the slots may be placed so close together (leaving space only for a driving-gear) that in a batten of normal width there may be woven a considerable number of ribbons more than in a batten of the ordinary construction.

In the accompanying drawings, Figure 1 is a front view of the batten. Fig. 2 is a back view of the same; Fig. 3, a cross-section.

The batten *a* is in its outer contours similar to known constructions. The slots *b*, through which the warp is passed, in lieu of forming rectangles, as in ordinary battens, are slanted—that is to say, the vertical sides are perpendicular and parallel each other and their cross sides inclined to the horizontal plane, forming thus rhomboids, the upper acute angles of which lie in the same horizontal line, so that all rhomboids are situated equally high. From both sides of the slanting slots *b* extend grooves *c*, running parallel to the oblique sides of the slots *b* and extending over and below the neighboring slots *b*. In said grooves fit the shuttles *d*, which are reciprocated in the following manner:

In a suitable recess *e* of the batten *a* is journaled a rack *f*, which is shifted to and fro in the usual manner by straps or cords *g*, guided around pulleys *h* and fixed to the rack *f*. The pulleys rotate on pivots *i*. In an angle-bracket *k*, fastened to the back side of the

batten, are located the journals *l*, just in the middle between two weaving-holes *b*. To these journals *l* are fixed cog-wheels *m*, which mesh with the rack, so that by the reciprocating movement of the latter the journals *l* are correspondingly rotated. The journals *l* carry two other driving-wheels *n*, one above each other. The back side of each of the shuttles is provided with a rack *r*, which is also embedded in its groove *c*, but is made accessible from behind by a recess *s*, so that it may be engaged by one of the pinions *n* on journals *l*. Each shuttle will thus be reciprocated by two pinions *n*—a lower one at the right side of its corresponding slot and an upper one at the left side of the slot. The lower pinion engaging the shuttle first drives it in the inclined direction to the upper pinion, which receiving the shuttle carries it to the end of its stroke and back again to the lower pinion.

From a glance at the drawings it will be easily understood that the weaving-openings may be arranged closely together, space only being left between adjacent openings for the small driving-pinions, so that it is possible to greatly increase the number of slots in the batten, and consequently to weave at one time an increased number of ribbons by means of this improved loom. If the same number of bands be produced as on a loom of known construction, the loom will be narrower, and in this case the weaver can better attend to the work.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a loom for making bands ribbons or other narrow woven articles a lathe or batten having slanted slots for the passage of the warp-grooves extending to the right and left from said slots parallel to the inclination of the slots and being adapted to receive the shuttles, and means to reciprocate the same as described and for the purpose set forth.

REMY WILMS.

Witnesses:

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